

## Allied Health Professionals, Essential but Neglected

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### ABSTRACT

In today's changing health scenario, management and quality health care has been the crude demand of society, where the pandemic of Covid-19 during 2019-21 has been a major lesson for individuals about the current devastating health scenario. The health management system in India has been described based on the responsibility of general practitioners, nurses, and allied healthcare professionals. However, the balance of educational support and other efforts has been not considered effectively rather the era of nepotism and disregard in the healthcare sector have been increasing irrespective of consideration for respective needs. "Health is for all, and everyone plays their own part in maintaining so", these quotes may be found to be more lucrative than their actual practical existence in the surrounding especially for the case of different spectra of healthcare workers. Hence, it is an urgent call for considering the responsibilities of each individual role in healthcare rather than limiting to the old books that need to be torn apart. This paper thus highlights the role, need, scarcity, actuality, reality, and ahead steps for the management of the health system.

**KEYWORDS:** Allied health care, Roles of the allied professionals, Job specification of allied health care professionals, Current status of Allied health care, Paramedical, Modern Healthcare System, Important but Neglected

### INTRODUCTION

The Article 21 of the Indian Constitution protects the right of an individual for health ensuring the life and health of each resident. Even, the World Health organisation focuses on the concept of health management with the quality of care since irregularity in any health issue could influence economic development, overall productivity, natural balance, and even the thoughts for future. Developing nations, as India needs to have a crucial and Quality Care Health System, where services need to be effective, safe, and people centric. Hence, the current life expectancy at birth has increased to 69.6 years in 2020 from 47.7 years in 1970 justifying the ages of improvement that India has been enriching. However,

health management across the country has been still in the phase of dilemma that affects the health system of the overall scenario. Currently, the Ministry of Health and Family Welfare, Government of India reports that there are only 20 healthcare general practitioners (doctors) per 10,000 individuals, 6 nurses and 8 Allied health professionals over 10,000 individuals clarifying that 200% need for nurses and 64 lakhs allied health care employees are still a need of this society. This drastic scarcity has been easily evident during the period of Covid-19 pandemic when the healthcare system thrashed like a boom due to the hidden lacunas of healthcare professionals from ground zero.

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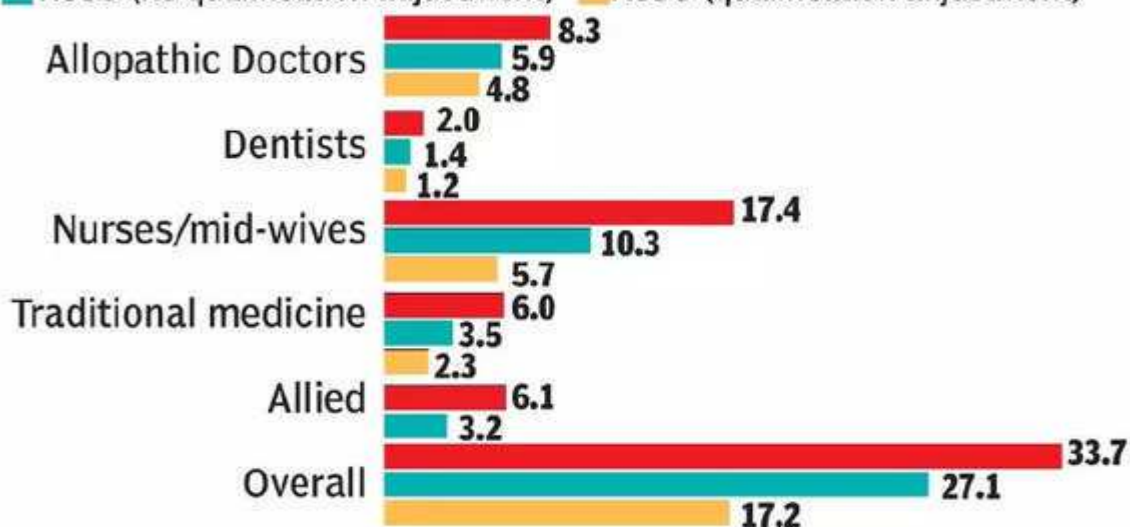


## NURSE-DOC RATIO 1.7:1, OECD AVG 4:1

Number of health professionals/workers per 10,000 persons (2018)

■ NHTWA

■ NSSO (no qualification adjustment) ■ NSSO (qualification adjustment)



\*NHTWA figures indicate health workers/professionals as registered. NSSO figures depict those who are active, before and after qualifications are considered

Nevertheless, the Indian education system for medicines has created a significant difference between the educational patterns where the majority of the colleges, especially across the states of West Bengal, Bihar, Odisha, and many more, have been trying to omit the major pre-clinical subjects such as Anatomy, Physiology, Biochemistry and others as not required portions, especially for those who have been studying for posting in departments of critical care unit, intensive care units, and operation theatres. Students rather the faculties and the deans of these courses have been pointing out that not only the need of these courses is negligible and is like a burden to them for carrying forward.

Community Related Services	Diagnostic Services	Curative Services	Non-Direct Care	Rehabilitative Care
<ul style="list-style-type: none"> <li>•Social Health activist</li> <li>•Diabetes educator</li> <li>•AIDS educator</li> </ul>	<ul style="list-style-type: none"> <li>•Medical laboratory Technologist &amp; Technician</li> <li>•Medical Radio-Imaging Technologist &amp; Technician</li> <li>•USG technician</li> </ul>	<ul style="list-style-type: none"> <li>•Physician associate/assistant</li> <li>•Operation Theatre Technologist &amp; Technician</li> <li>•Critical Care Technologist &amp; Technician</li> <li>•Perfusion Technologist</li> <li>•Radiotherapist</li> </ul>	<ul style="list-style-type: none"> <li>•Nutritionist</li> <li>•Dietician</li> <li>•Dietician</li> <li>•Nursing care assistant</li> </ul>	<ul style="list-style-type: none"> <li>•Psychotherapist</li> <li>•Audiologist</li> <li>•Physiotherapist</li> <li>•Occupational Therapist</li> <li>•Speech Therapist</li> </ul>

### Diverse Role of the Allied Health Care

Furthermore, every healthcare professional have their different role and this assistance or care requires effective training and knowledge for the betterment. However, syllabus and curriculum of these courses have been still a great question mark due to the varied opinions of their job roles where various universities try to opt business entrepreneurship whereas other focuses on developing some research tactics. On the contrary, certain universities and college focuses on reducing the loads of pre-clinical subjects that may be essential parts of health management. The major issue in this portion is the non-acceptance of low knowledge of faculty members rather than trying for better educational perspective of future. Thus, these aspects of deranged health system in the India could be found to be affected by the causes and derangement in the system of education opted by the students. Hence, certain question arises from this part of the introduction as follows:

- Who are allied health care?
- What is the need of these allied health care working
- What are roles of each allied health professionals in the field of maintaining health of society?
- What sort of syllabus do an allied health sciences should focus on?

### Allied Health Care:

Allied health care system in currently comprises of several sub branches, designed to serve in more precise & specialized manner, in different sectors of the health care delivery system. The term 'Allied' stands for 'associated', that means it is the associated system of health care delivery chain, especially designed to assist & manage the gap between the community & the medical fraternity & to render the services in more precise & specialized manner. In this current date, allied health system has emerged as the irreplaceable part of this modern health care delivery chain.

### Major Allied Health Care Delivery Systems of India:

Sr. No.	Systems	Grade
01	Medical Laboratory Technology	Graduation & Post graduation
02	Medical Laboratory Technician	Diploma
03	Critical care technology	Graduation
04	Specialist in Critical care science	Post-graduation
05	Critical care technician	Diploma
06	Operation theatre technology	Graduation & Post graduation
07	Operation theatre technician	Diploma
08	Physician associate/ assistant	Graduation & Post graduation
09	Medical Radio Imaging Technology	Graduation & Post graduation
10	Medical Radio Imaging Technician	Diploma
11	Physiotherapy	Diploma, Graduation & Post graduation
12	Perfusion Technology	Diploma, Graduation & Post Graduation
13	Optometry	Diploma, Graduation & Post Graduation, Doctorate
14	Audiology & Speech language pathology	Diploma, Graduation, Post-graduation, Doctorate
15	Dialysis technology	Certificate, Diploma, Graduation

### Need for the Allied Health Care Professionals:

- To support the community health care
- To bridge the gap between the sufferers & doctors
- To match the scarcity of the doctors & nurses
- To provide the essential health care, where needed.
- To reduce unnecessary hassles & delay in the health care delivery.
- To strengthen the health care delivery system in the rural set up.
- To make the health system easily operable, systematic & understandable.

### Epidemiology:

Paramedical Sciences or Allied Health Sciences are accounted to be one of the major fields of medical sciences that mainly deal with non-invasive medical treatments. This particular brand of current medical system covers a wide range of varying subjects of science relating to medical care. Here the key focus of paramedical sciences is to put more emphasis on actual physical procedures with common goals to take care or to provide good care and support to patients. On this account, a good paramedics or Allied Healthcare professional must be highly trained practitioners who will be capable to take the lifesaving decision under pressure at ease during the major difficulties or in case of emergency situations. On this account, Paramedical Sciences or Allied Health Sciences can be referred to as the combination of both social skills with wide medical knowledge with a unique ability to managed or deal with patients under pressure, especially in case of medical emergency. The country such as India for instance in the current health scenario are in need of about 64 Lakh paramedics professionals to fulfil the rising demand. Kaptan Singh Seharawt, the general secretary of the Joint Forum of Medical Technologists of India (JFMTI), an umbrella body of paramedics in India quotes to "...Approximately 70% in the country are not trained for the job they do".

According to the report titled as "**A universal Truth: No Health without a Workforce**" under WHO outlines that Indian is one of the 83<sup>rd</sup> countries that fails to meet the minimum need of having a healthcare workers of 22.8



per 10,000 individuals despite the country having 15.8 skilled healthcare professionals per 10,000 people. This makes it even worse than Country highlighted table below:

Country	Need for healthcare professionals per 10,000 people
<i>Sri Lanka</i>	24.5
<i>Thailand</i>	17.4
<i>Africa</i>	43.4
<i>Cuba</i>	159.1

The report further outlines that healthcare workers globally will eventually fall short by a whopping 12.9 million in 2035. One of the major reasons for this in the current scenario can be accounted due to ageing workforce but with falling number of people entering the profession. Apart from this early retirement, lack of proper training, and major rise in the demands from growing as well as ageing population can be attributed as some of the major reasons for the global shortage of healthcare workers. In India, this shortage is accounted to be very acute due to which physicians are accounted to be more than the nurses in the country are. In terms of globally accepted standards of 2.8 nurses for each physician, India has only 0.1 nurses for each physician or rather say one nurse for each 10 physicians. In accordance to the 2012 survey report under health ministry of National Initiative for Allied Health Sciences and Public Health Foundation of India has also presented its concern for the acute shortage of qualified paramedic staff in India.

India for instance is accounted to be short by over 850,000 anaesthetists and technicians for operations theatres. The extension of this further shortage can be witnessed in the table below:

Category of health workforce	Demand	Supply	Unadjusted Gap
<i>Ophthalmology</i>	145,236	17,678	127,558
<i>Rehabilitation</i>	1,862,584	40,265	1,822,319
<i>Surgical and intervention</i>	205,088	7,215	197,873
<i>Medical laboratory</i>	76,884	15,214	61,670
<i>Radiography and imaging</i>	23,649	4,352	19,297
<i>Audiology and speech language</i>	10,599	3,263	7,336
<i>Medical technology</i>	239,657	3,587	236,070
<i>Dental assistance technology</i>	2,048,391	6,243	2042148
<i>Surgery and an aesthesia</i>	862,193	4,050	858,143
<i>Miscellaneous</i>	1,074,473	181,511	892,962

One of the major reasons for this can be can be accounted due to lack of Comprehensive Central legislation for monitoring paramedics in the current situation. In addition can also be due to the absence of a Central Law as there is not no standard minimum qualifications for the appointed paramedics such as laboratory assistants, Compounder, Critical Care Technicians, X-ray assistants and so on. Apart from this, to make the matter worst most of the standards that has been set has been accounted to be copied from other countries planning them efficiently with the healthcare needs in India. In addition, there is still the major gap or un-assurance from the government for the laws to regulate as well as for the standardisation of skill development programs for Paramedic or Allied Healthcare professionals.

Despite of the fact that lost of efforts has put into action for the consistency and holistic concept in paramedical education in the country with the establishment of one national Institute of Allied Health Services and nine rural institute of Allied Health Services as well as a state level Council but all in vain. There a need for realisation that creating a pool of qualified paramedics is not important but rather building a team of skilled and expert individuals is more crucial for the country.

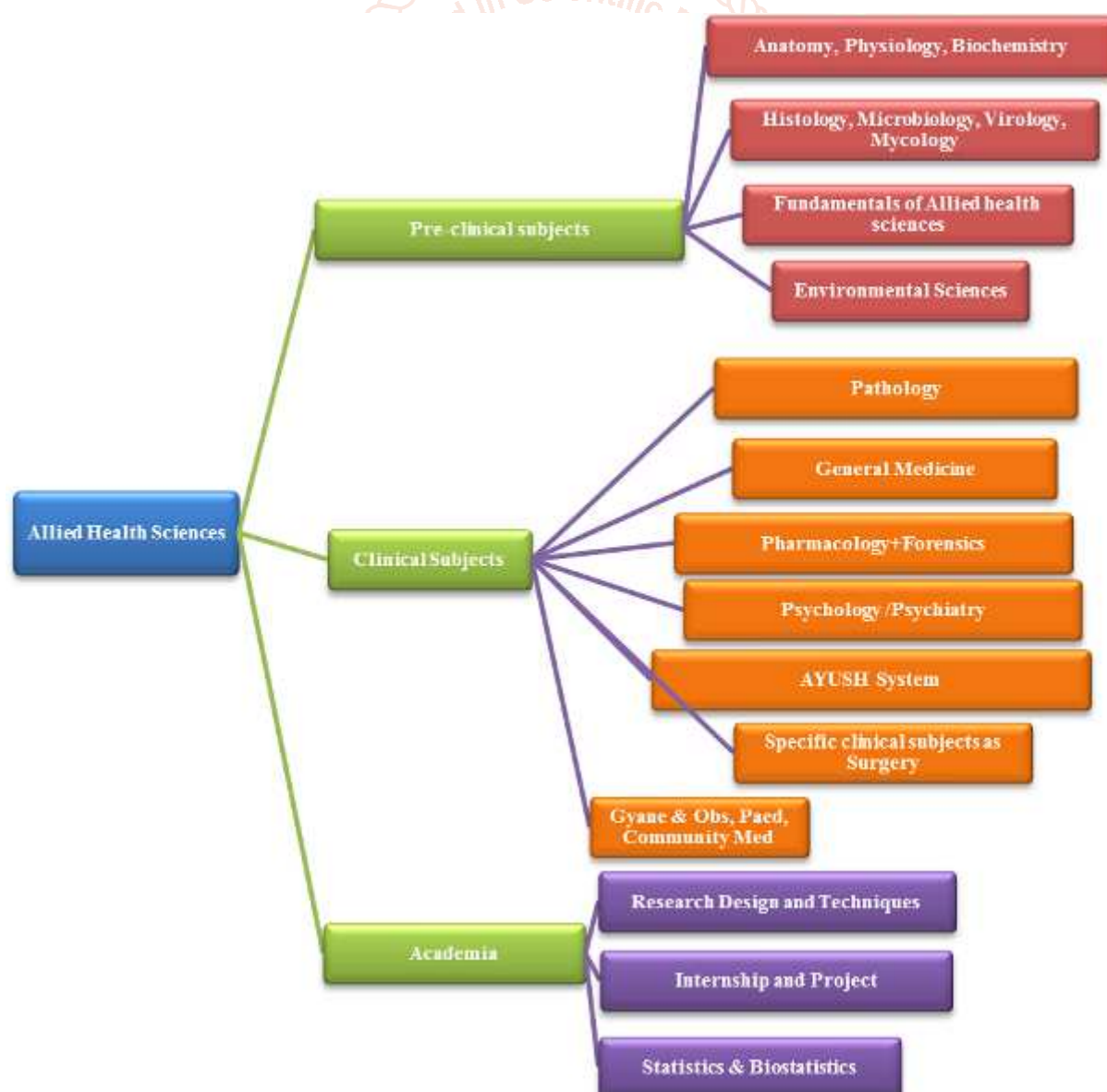
Furthermore, Lack of standard average qualification for recruiting paramedic staff will often lead to mixture of students graduating from an institute with lack of proper infrastructure with those under a well-established medical college. The concern rises with the increasing number of ill-equipped private institutes that has been sprouting across India enrolling for students based on false job opportunities in government hospitals. Mohali for instance a private paramedical institute under Para Medical Council received disapproval from the Government of Punjab in 2014 for promoting itself as a government-recognised institute that assured students with government jobs to take the mass admission. A malpractice such as this if goes unnoticed by the paramedical council than the future of Allied Health Services accounted to under a major threat in the country with greater production of quack rather than skilled Paramedic Healthcare professionals in the country.

On contrary to this, the paramedical councils in states such as Rajasthan ensures to register only those private and public institutes that holds well-established or well-constructed educational plan and infrastructure to meet its basic minimum criteria. The move such as this is likely to make same changes in the quality of education in the sector of Paramedical Sciences or Allied Health Sciences.

However, the masterstroke in strengthening this sector demands for well-established educational system with proper infrastructure to help students enhance their skills as well as knowledge simultaneously. Apart from this lack of rules in governing, the process of recruiting skilled professionals stands major barrier for the degree holder globally. Here, those unskilled or less skilled are will to work under any payment scale while those skilled seek for more money. On this account due to lack of qualification criteria for hiring, most private healthcare unites often ignore the skills and rather focuses on quantity, which puts the life of patients at the major risk.

### Training:

As Allied health care system belongs to the health care delivery chain, designed to deal with the quality of life of the community, it demands equal standard of education as the conventional medical education, i.e. MBBS, BHMS, BAMS, BUMS e.t.c. The system is that integral part of the chain, which have emerged as the major backbone to deliver a quality & effective health care. But, when we are talking about the current status of the system then it is like a body called health care delivery system, with an osteoporotic vertebral column, which means under qualified, skilled professionals, which is not at all acceptable. In majority of the institutions, the courses are provided in a very ridiculous manner, where too much focus is given on the hands on training but not in the holistic development of the efficacy of the students. It is not only unethical; rather it is highly injurious to the future of the health system.



**Ideal syllabus for all courses of Allied Health Sciences**

Increasing spectrum of need for the allied health sciences specifies on providing effective knowledge to them where the range of barriers between practical health and theoretical health perspectives could be reduced. Various universities and their mentors have been depriving the health system by not listing above mentioned subjects within the course rather focuses on including foreign language, business entrepreneurship, Computer basics, Tally, graphic designing and other subjects as major subjects instead of adding pre-clinical and clinical subjects. Furthermore, various universities have been not paying to these allied health experts that could further even train other students for a healthy society where people from backgrounds of Biotechnology, Botany, and other streams apart from health area have been appointed as faculties increasing the risk of health assessments as well as such unethical deeds have been growing across the country where doctors, nurses, physiotherapist, allied health professionals, and other people of health sciences have been providing training in very limited colleges. Thus, there has been a need for recovering health education system where specific distribution of pre-clinical, clinical, project and internship should be present in the curriculum instead of unethical practices of including business mindedness in allied health students.

### **Ideal Protocol of Training:**

- Selection of the students must be through a uniformly designed entrance examination.
- The focus must be given on the total intellectual & professional development of the students, rather to focus on the hands on training only.
- The mode of training must be engaging & innovative, which compels the student to think independently, because in the bedside, anything can happen in any time.
- The focus must be given on the problem solving capability of the students.
- The subjects taught require equal emphasis like other fields, sharing similar designation.
- The instructors must go through a continuous professional & academic updation.
- The mode of teaching must be comprises of theoretical lectures, which must be demonstrated in a practical set up.
- Clinical & bedside training is necessary in different setups after acquiring total knowledge regarding the pre-clinical & clinical subjects taught in the conventional medical schools.
- The design of the teaching must focus on the noble values of the profession.
- The trainers must be equipped with modern clinical research methodologies & tools.
- The training must include diverse knowledge regarding all the prevalent medical systems, without any biasness.
- The training must possess the comparative study of the prevalent system & emerging advancements, so that the candidate must develop an independent understanding.
- Trainees must have the knowledge about the community needs & standardized approaches to match the need.
- Trainees must be aware about their specific designed job roles as per the community need & standards.

### **Job Roles:**

Sr. No.	Name of the Field	Job Roles
01	Physician Associate/ Assistant	<ul style="list-style-type: none"> <li>➤ Can perform the Clinical procedures in bedside</li> <li>➤ Can conduct the basic emergency managements</li> <li>➤ Can assess the current health status to update the physician.</li> <li>➤ Can be equipped to work in Ward &amp; OPD</li> <li>➤ Can assist in surgery under the supervision of a registered surgeon.</li> <li>➤ Can conduct basic training &amp; awareness programmes.</li> <li>➤ Can take part in the community research</li> <li>➤ Can take part in the clinical research</li> <li>➤ Can work in a gynae &amp; obs set up under the supervision of a gynaecologist.</li> <li>➤ Can take part in the Academia</li> <li>➤ Can perform lifesaving procedure under the supervision of a qualified registered medical practitioner.</li> <li>➤ Can work as the bridge between the doctors &amp; nurses.</li> </ul>

02	Critical care technology	<ul style="list-style-type: none"> <li>➤ Can be the staff to take care about the instruments required in the critical care unit.</li> <li>➤ Can be the support staff in Critical care unit</li> <li>➤ Can perform emergency management in the critical care set up.</li> <li>➤ Can perform lifesaving procedure under the supervision of a qualified registered medical practitioner.</li> <li>➤ Can work as the bridge between the doctors &amp; nurses, like physician associates.</li> <li>➤ Can take part in the Academia</li> <li>➤ Can train the trainees regarding the instruments used in the critical care unit.</li> </ul>
03	Operation Theatre Technology	<ul style="list-style-type: none"> <li>➤ Can be the staff to take care about the instruments required in the operation theatre.</li> <li>➤ Can be the support staff in Critical care unit</li> <li>➤ Can perform emergency management in the OT &amp; can perform post-operative management.</li> <li>➤ Can perform lifesaving procedure under the supervision of a qualified registered medical practitioner</li> <li>➤ Can work as the bridge between the doctors &amp; nurses, like physician associates.</li> <li>➤ Can take part in the Academia</li> <li>➤ Can train the trainees regarding the instruments used in the OT.</li> </ul>
04	Perfusion Technology	<ul style="list-style-type: none"> <li>➤ Can be a part of cardio-thoracic surgery.</li> <li>➤ Able to take care about the instruments required in cardiac surgery</li> <li>➤ Specialized staff in cardiac surgery</li> <li>➤ Can perform lifesaving procedure under the supervision of a qualified registered medical practitioner</li> <li>➤ Can work as the bridge between the doctors &amp; nurses, like physician associates.</li> <li>➤ Can take part in the Academia</li> <li>➤ Can train the trainees regarding the instruments used in the cardiac surgery</li> </ul>
05.	Medical laboratory technology/technician	<ul style="list-style-type: none"> <li>➤ Can be a part of confirmatory diagnosis</li> <li>➤ Can focus on justifying out the actual physio-pathological state of an individual</li> <li>➤ Regulating therapy for an individual in different aspects</li> <li>➤ Promoting health care and prevention and control of disease</li> <li>➤ Can perform effective laboratory work correctly to focus on maintaining health care</li> <li>➤ Can take part in academic research</li> </ul>
06.	Medical Radio imaging	<ul style="list-style-type: none"> <li>➤ Can perform radiological diagnosis and management of the radiological response</li> <li>➤ Can perform effective diagnosis of disease and management protocol</li> <li>➤ Can perform technological operations for maintaining smooth operations of radiological diagnosis</li> <li>➤ Can take part in developing effective academic knowledge on radio diagnostics</li> <li>➤ Can take part in academic research</li> </ul>
07.	Optometrist	<ul style="list-style-type: none"> <li>➤ Can take effective part in maintaining the health perspective for eye or ophthalmology</li> <li>➤ Can take effective part in detecting defects in vision, signs of injury, ocular disease and others</li> <li>➤ Can prescribe and administer certain drugs for eye health and even develop spectacles for varied issues</li> <li>➤ Can assist in some set of operations</li> </ul>
08.	Physiotherapist	<ul style="list-style-type: none"> <li>➤ Can assess, manage, and treat broad range of medical conditions</li> <li>➤ Relieve physical pain and heals injuries</li> <li>➤ Provide gait training and posture correction</li> <li>➤ Can take part in Academia</li> <li>➤ Can increase mobility, build strength, improve balance, and enhance cardiopulmonary performance</li> <li>➤ Using variety of techniques to maintain the property of muscles and joints</li> </ul>



**The National Commission for Allied and Healthcare Professions Act, 2021**

The outbreak of Covid-19 pandemic and destruction of the Indian medical and health system urged the need of including a regulatory body for the maintenance and regulation of education and professional of allied health sciences. In this regard, the Ministry of Law and Justice enacted the following Act of Parliament received with the assent of President on 28<sup>th</sup> March, 2021 “to provide regulation and maintenance of standards of education and services by allied and healthcare professionals, assessment of institutions, maintenance of a Central Register and State Register and creation of a system to improve access, research and development and adoption of latest scientific advancement and for matters connected therewith or incidental thereto”. However, the above statements of the Act focuses on highlighting the spectrums for allied health sciences; although, the majority of ex officio of the register is based on the professionals of major health system including doctors and dean of universities rather than including any allied healthcare professionals that has hence made the situation more worse than the previous scene as the commission headed by non-professionals of allied healthcare have been maintaining the system. Thus, the approach of Act on maintaining the register for following courses need to focus on inclusion of matters related to the issues of education, job roles, and training of these and more allied healthcare professionals:

1. Medical Laboratory and Life Sciences
2. Trauma, Burn Care and Surgical/ Anaesthesia related technology
3. Physiotherapy Professional
4. Nutrition Science Professional
5. Optometry Professional
6. Occupational Therapy Professional
7. Community Care, Behavioural Health Sciences and other Professionals
8. Medical Radiology, Imaging and Therapeutic Technology Professional
9. Medical Technologists and Physician Associate
10. Health Information Management and Health Informatics Professional

**Comparative Study between the Actuality & Reality of the Allied Health Care:**

Sr. No.	Points	Actuality	Reality
01	Gateway Examination	Always required	In majority of the cases, not seen
02	Practical implementation of the theoretical knowledge over the pre-clinical subjects	Need equal depth of instructions, given in a medical school.	Highly neglected
03	Dissection	Required	Less/no attention provided
04	Practical laboratory training	Always required	Less/No attention provided
05	Designing of the manual of ethics & etiquette as per the allied health care set up	Urgently needed	Not existed
06	Training in Forensic Science	Must teach thoroughly with proper practical application.	Badly Compromised
07	Detail & thorough study of Clinical subjects	Deadly Required	Badly Compromised
08	Interdisciplinary training regarding the prevalent medical systems of the country	Deadly Required	Badly Compromised
09	Application of the subclinical subjects in clinical set up	Practical demonstration required	Never directed thoroughly.
10	Training in different set up including community & clinical set up	Deadly needed	Less/ No importance provided
11	Reading about journals & recent advancements in the medical system & allied field	Deadly required	Badly Compromised



12	Professional advancements of the faculties in a decorated & structured manner, under a strictly designed protocol	Required in an obvious manner	Not witnessed at all
13	Continuous Bi-annual assessments of the faculty members	Required in an obvious manner	Not witnessed at all
14	Publications of the institutional journals with research works done by the students & the faculty members	Required in an obvious manner	Not witnessed at all
15	Academic integrity	Needed	Never seen
16	Interdisciplinary & multifactorial development of the students in a totality	Needed in an obvious manner	Not witnessed at all
17	Noble values of the profession	Need to know & follow	Rarely taught
18	Specified job roles	Must be designed	Not follow thoroughly
19	Maintaining of uniformity & regulatory standard	Needed	Not seen
20	Cost of training	Must be minimum	Not thoroughly controlled

### Conclusion:

At the end, it could be concluded that the health of an individual is one of the important and crucial aspect of the nation where health management and intervention should be peculiar as well as effective in order to provide quality care. However, increasing biasness and lack of attention over the needs of healthcare system especially in the grounds of allied healthcare professionals demanding around 64 lakhs justifies that we need to transform the health management system and quality care has been reducing damaging the overall infrastructure of healthcare. Furthermore, it is the right time for the healthcare system to focus on enriching their curriculum and role of these allied health professionals rather than limiting to biasness and reduced efficiency of mentorship.

“REQUIRED, THAT DOES NOT MEAN WE HAVE TO ACCEPT THE PROFESSIONALS WITHOUT ANY PROFESSIONAL & ACADEMIC INTEGRITY.”

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